FIG.1

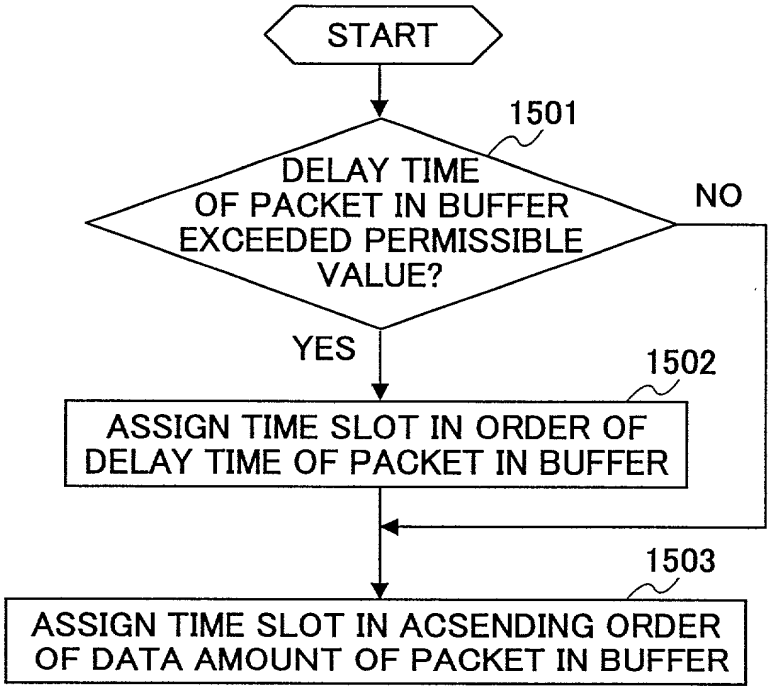

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FIG.2

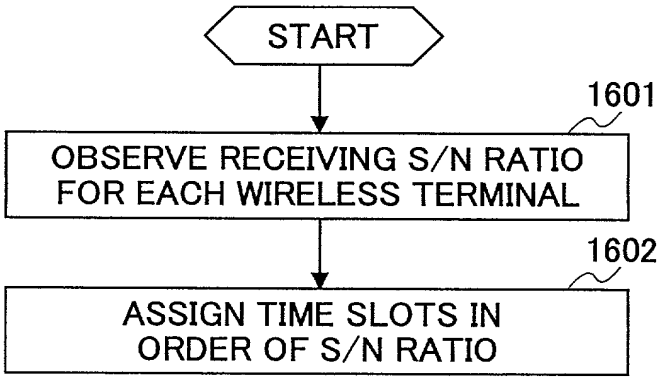

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FIG. 3

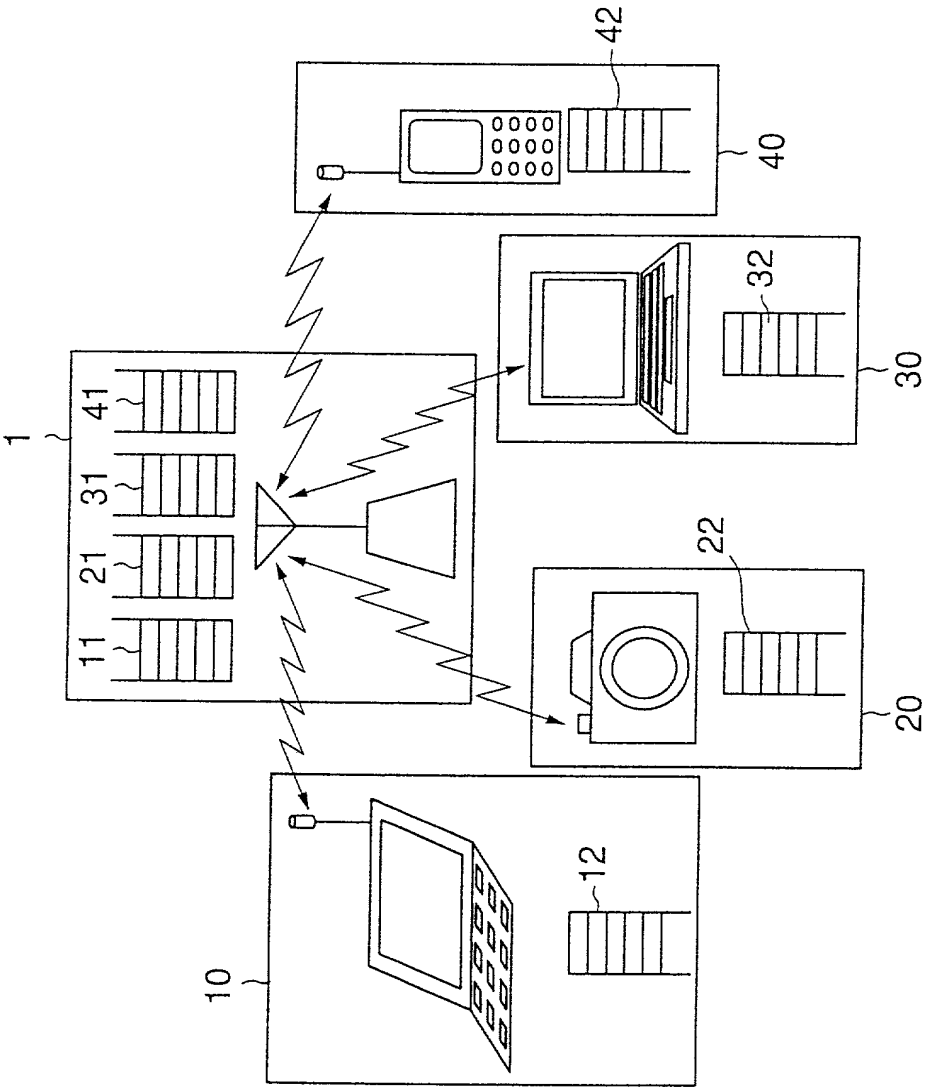


FIG.4

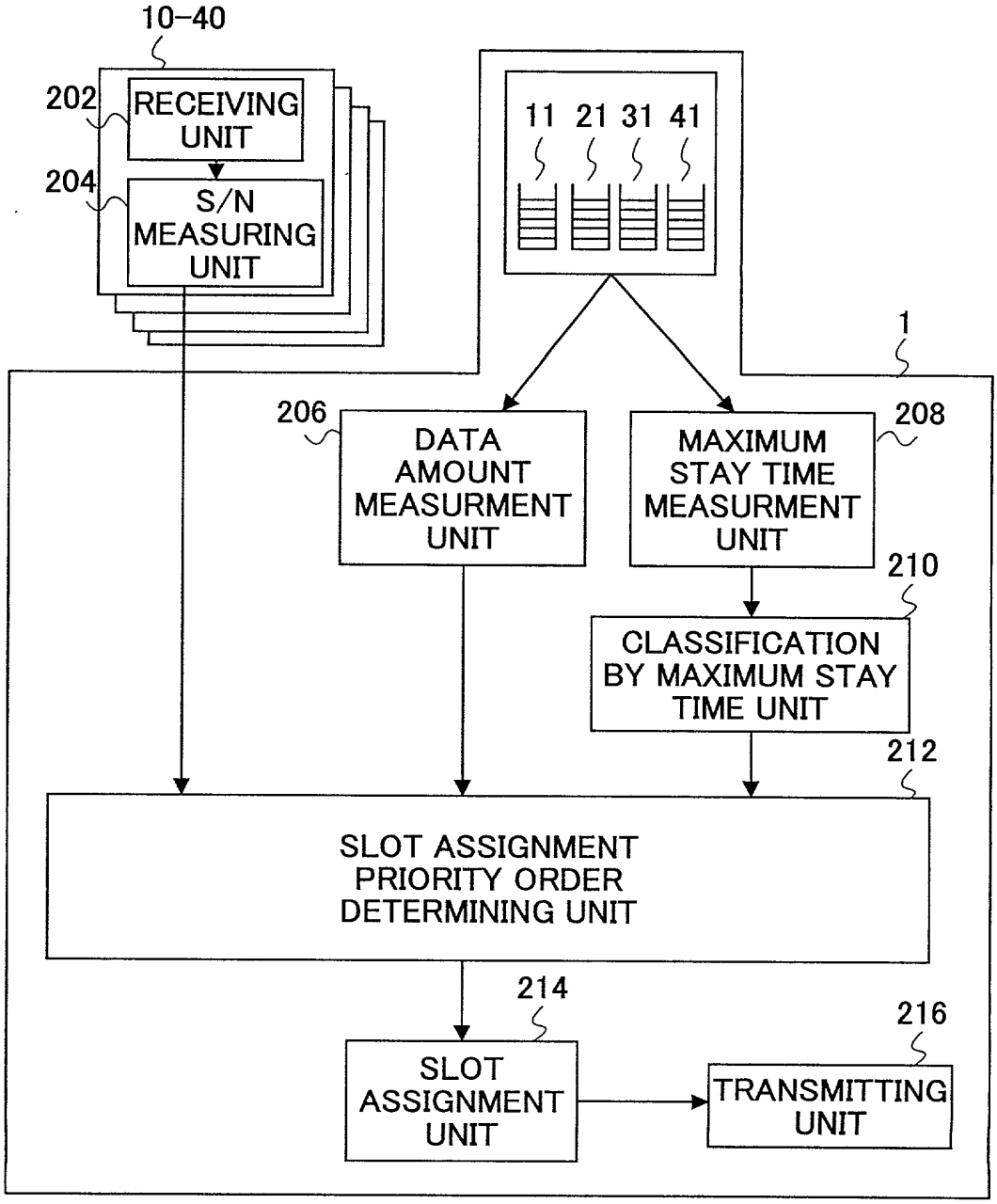

10-40
202
RECEIVING UNIT
204
S/N MEASURING UNIT
11 21 31 41
1
206
DATA AMOUNT MEASURMENT UNIT
208
MAXIMUM STAY TIME MEASURMENT UNIT
210
CLASSIFICATION BY MAXIMUM STAY TIME UNIT
212
SLOT ASSIGNMENT PRIORITY ORDER DETERMINING UNIT
214
SLOT ASSIGNMENT UNIT
216
TRANSMITTING UNIT

FIG.5

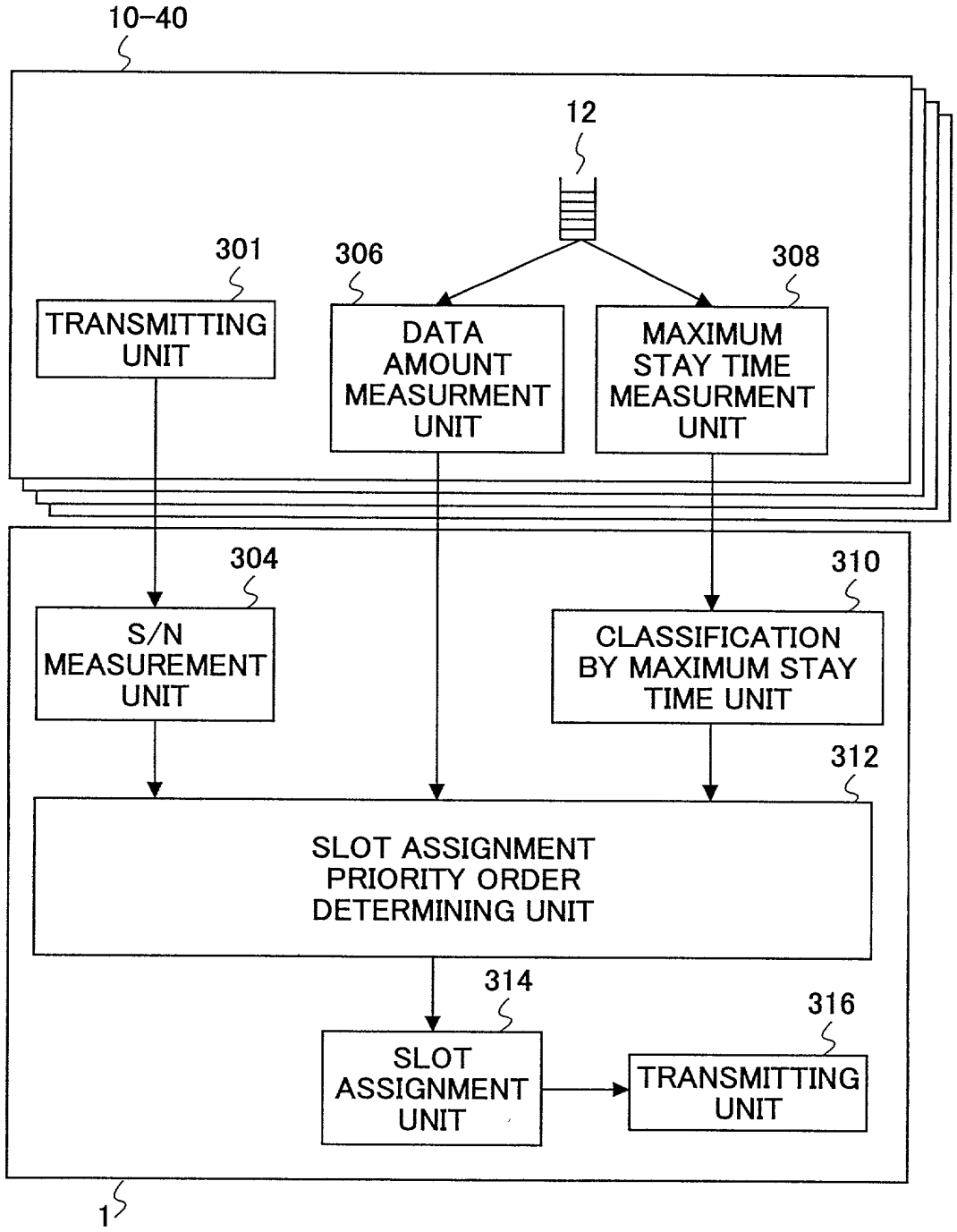

10-40
12
301
306
308
TRANSMITTING UNIT
DATA AMOUNT MEASURMENT UNIT
MAXIMUM STAY TIME MEASURMENT UNIT
304
310
S/N MEASUREMENT UNIT
CLASSIFICATION BY MAXIMUM STAY TIME UNIT
312
SLOT ASSIGNMENT PRIORITY ORDER DETERMINING UNIT
314
316
SLOT ASSIGNMENT UNIT
TRANSMITTING UNIT
1

FIG.6

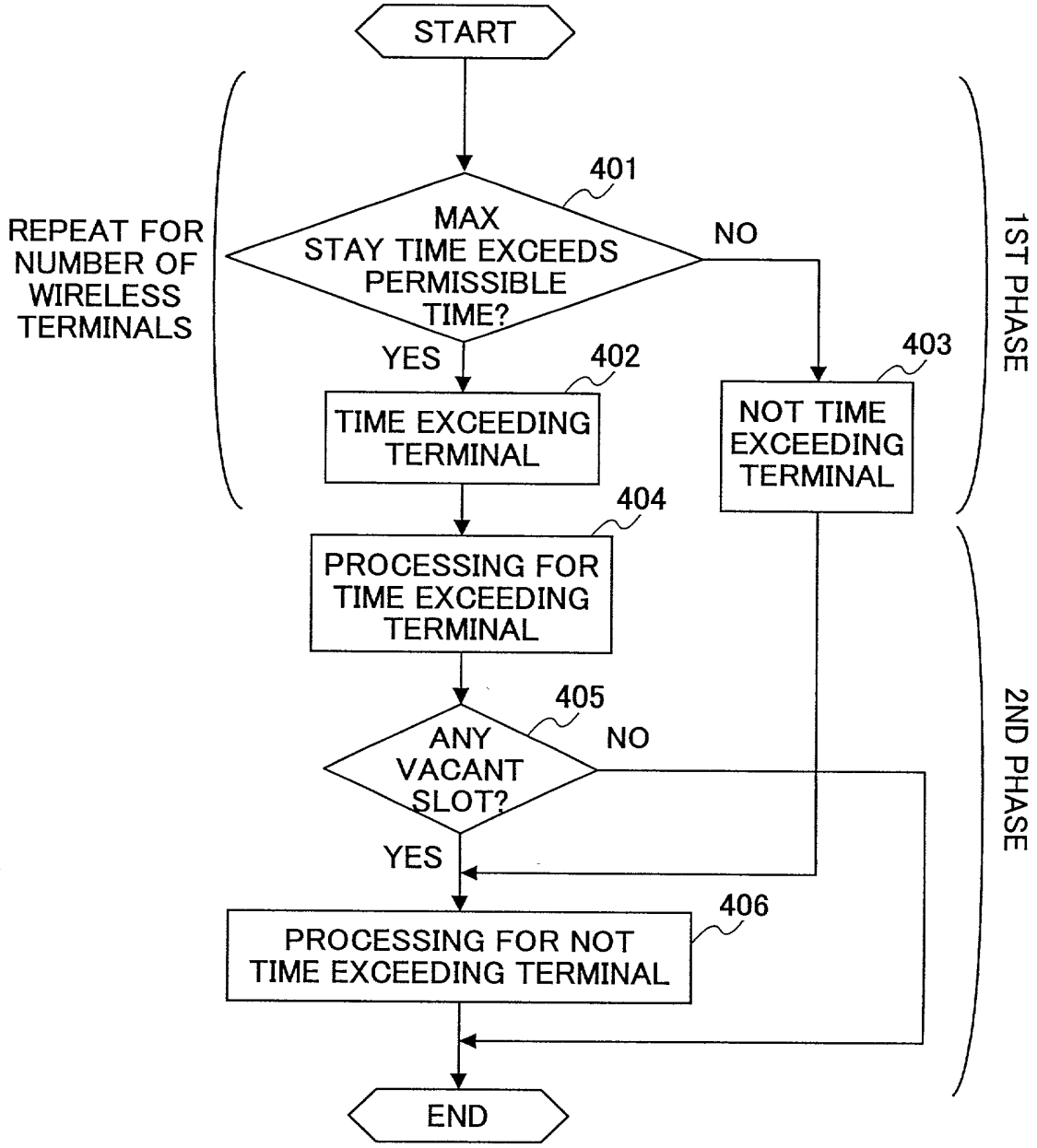

START
401
MAX STAY TIME EXCEEDS PERMISSIBLE TIME?
NO
YES
402
TIME EXCEEDING TERMINAL
403
NOT TIME EXCEEDING TERMINAL
REPEAT FOR NUMBER OF WIRELESS TERMINALS
1ST PHASE
404
PROCESSING FOR TIME EXCEEDING TERMINAL
405
ANY VACANT SLOT?
NO
YES
406
PROCESSING FOR NOT TIME EXCEEDING TERMINAL
2ND PHASE
END

FIG.7

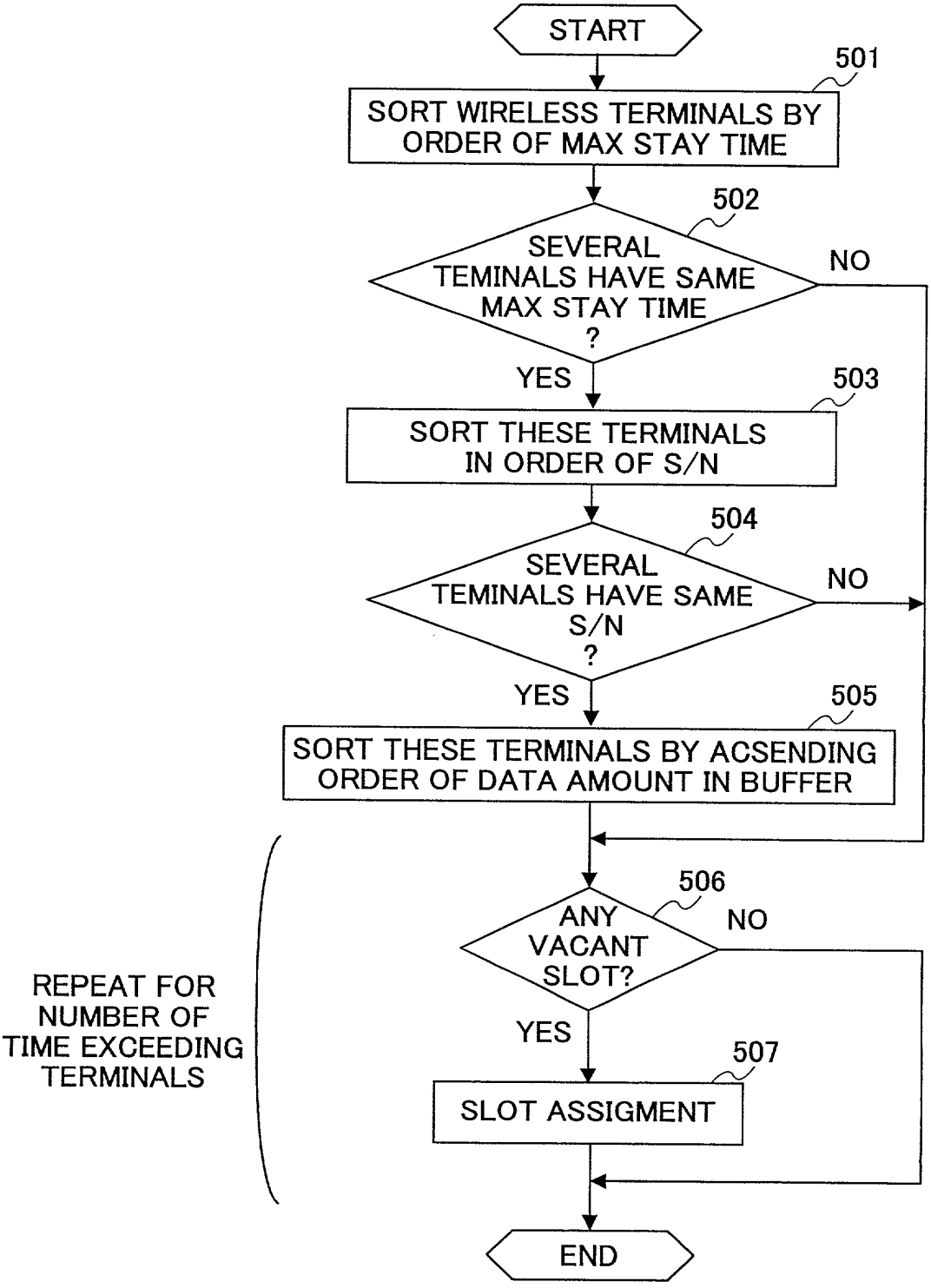

START
501
SORT WIRELESS TERMINALS BY ORDER OF MAX STAY TIME
502
SEVERAL TEMINALS HAVE SAME MAX STAY TIME ?
NO
YES
503
SORT THESE TERMINALS IN ORDER OF S/N
504
SEVERAL TEMINALS HAVE SAME S/N ?
NO
YES
505
SORT THESE TERMINALS BY ACSENDING ORDER OF DATA AMOUNT IN BUFFER
506
ANY VACANT SLOT?
NO
YES
507
SLOT ASSIGMENT
REPEAT FOR NUMBER OF TIME EXCEEDING TERMINALS
END

FIG.8

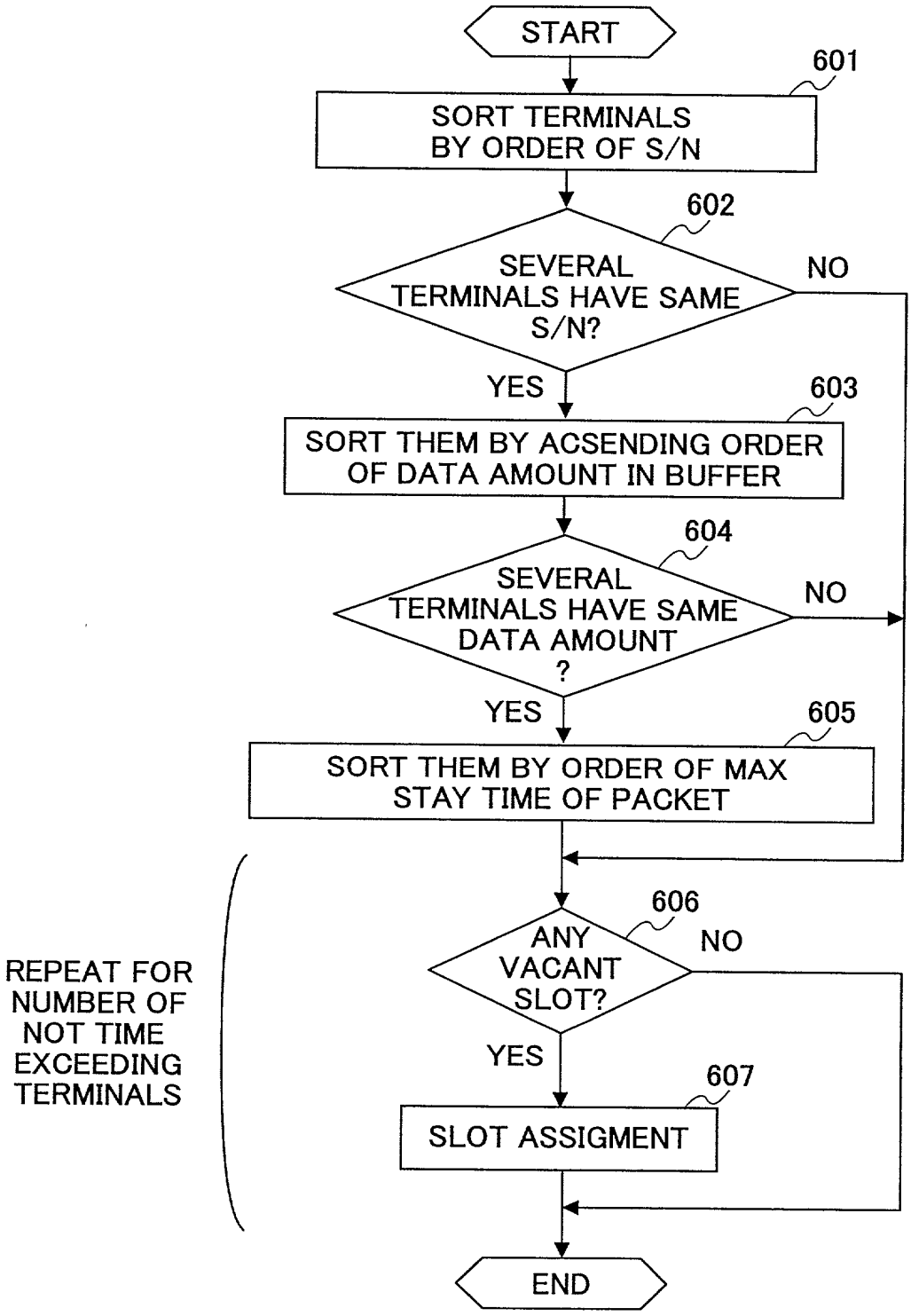

START
601
SORT TERMINALS BY ORDER OF S/N
602
SEVERAL TERMINALS HAVE SAME S/N?
NO
YES
603
SORT THEM BY ACSENDING ORDER OF DATA AMOUNT IN BUFFER
604
SEVERAL TERMINALS HAVE SAME DATA AMOUNT ?
NO
YES
605
SORT THEM BY ORDER OF MAX STAY TIME OF PACKET
606
ANY VACANT SLOT?
NO
YES
607
SLOT ASSIGMENT
REPEAT FOR NUMBER OF NOT TIME EXCEEDING TERMINALS
END

FIG.9

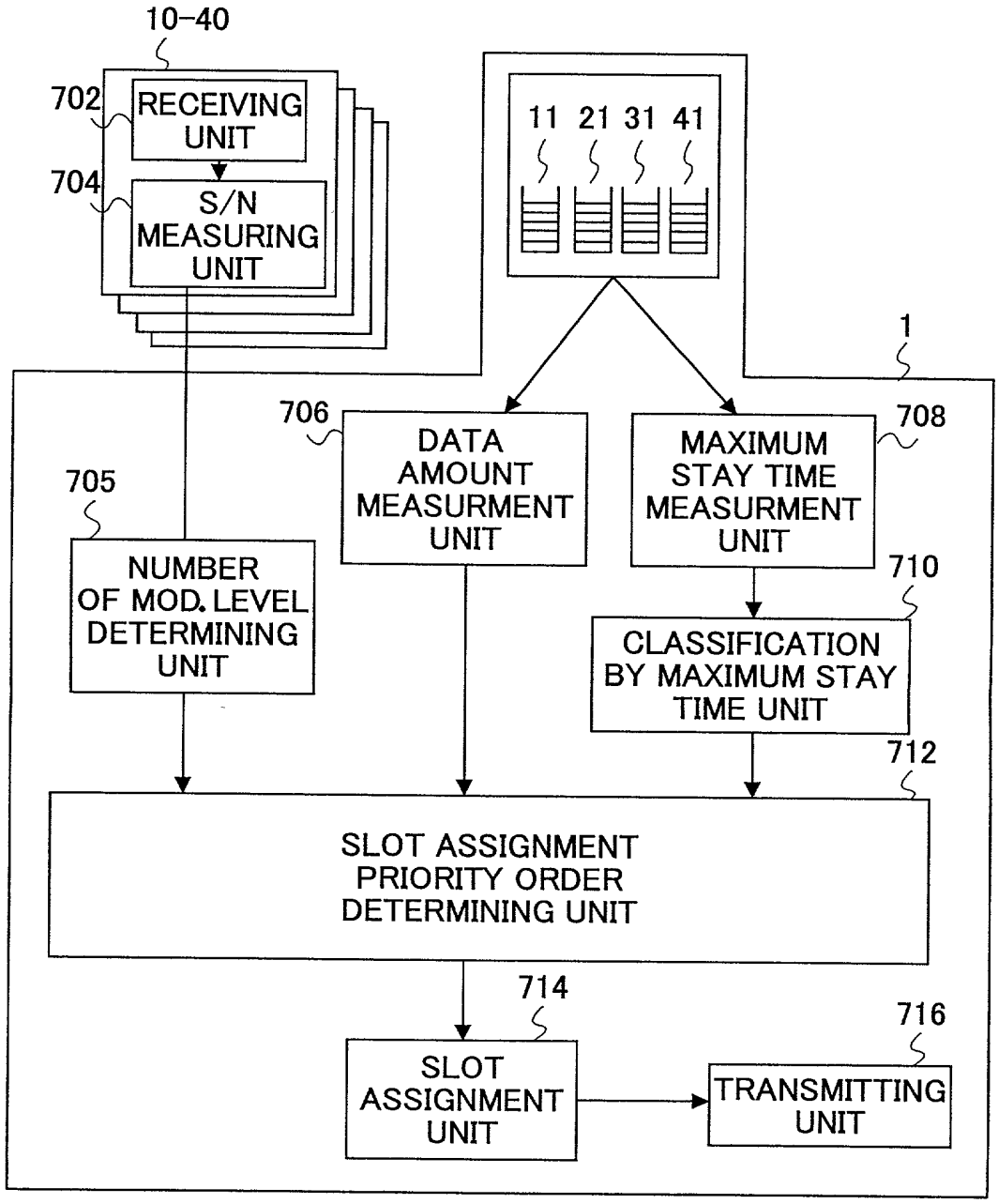

10-40
702
RECEIVING UNIT
704
S/N MEASURING UNIT
11 21 31 41
1
706
DATA AMOUNT MEASURMENT UNIT
708
MAXIMUM STAY TIME MEASURMENT UNIT
705
NUMBER OF MOD. LEVEL DETERMINING UNIT
710
CLASSIFICATION BY MAXIMUM STAY TIME UNIT
712
SLOT ASSIGNMENT PRIORITY ORDER DETERMINING UNIT
714
SLOT ASSIGNMENT UNIT
716
TRANSMITTING UNIT

FIG.10

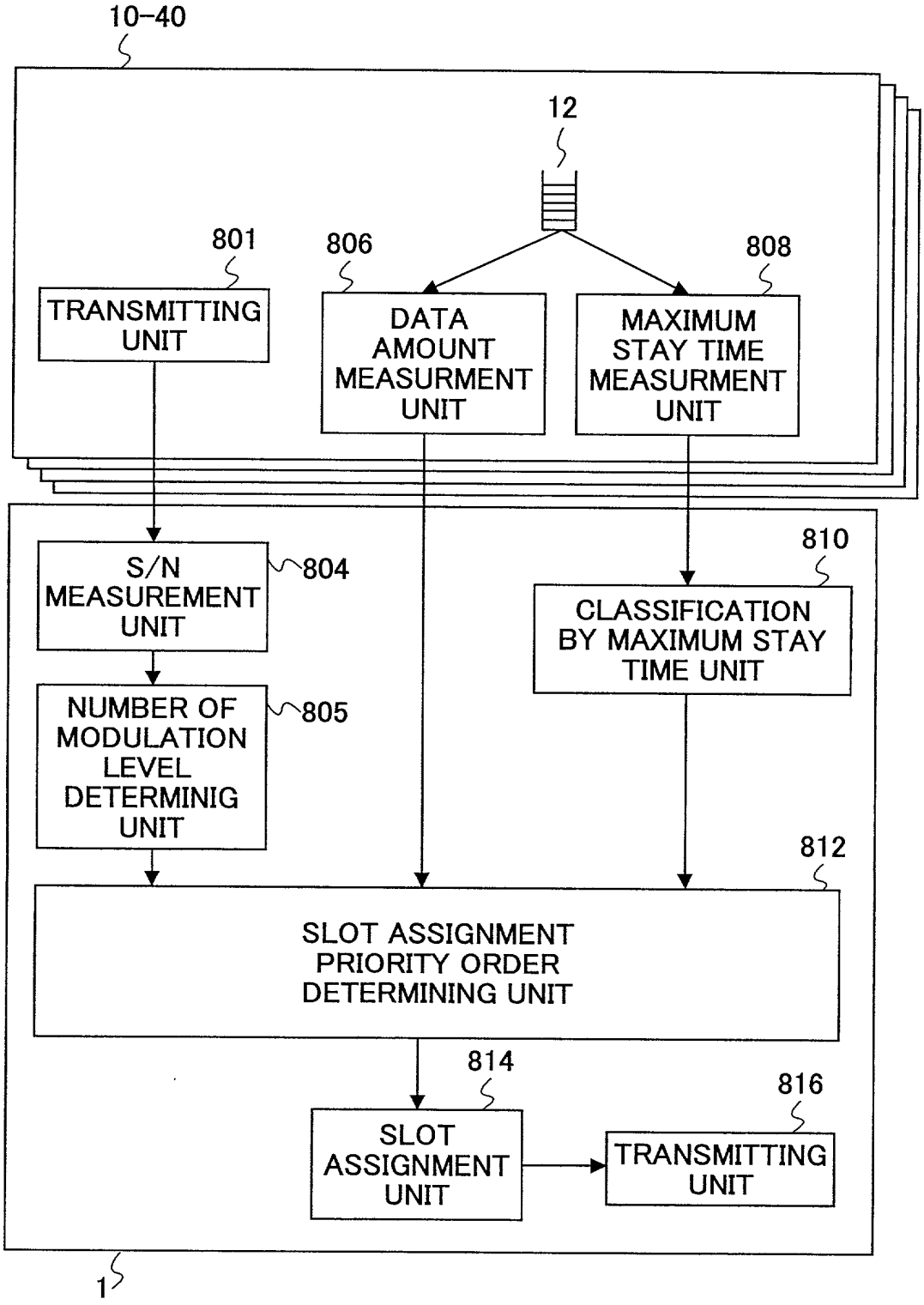

10-40
12
801
806
808
TRANSMITTING UNIT
DATA AMOUNT MEASURMENT UNIT
MAXIMUM STAY TIME MEASURMENT UNIT
S/N MEASUREMENT UNIT
804
810
CLASSIFICATION BY MAXIMUM STAY TIME UNIT
NUMBER OF MODULATION LEVEL DETERMINIG UNIT
805
812
SLOT ASSIGNMENT PRIORITY ORDER DETERMINING UNIT
814
816
SLOT ASSIGNMENT UNIT
TRANSMITTING UNIT
1

FIG.11

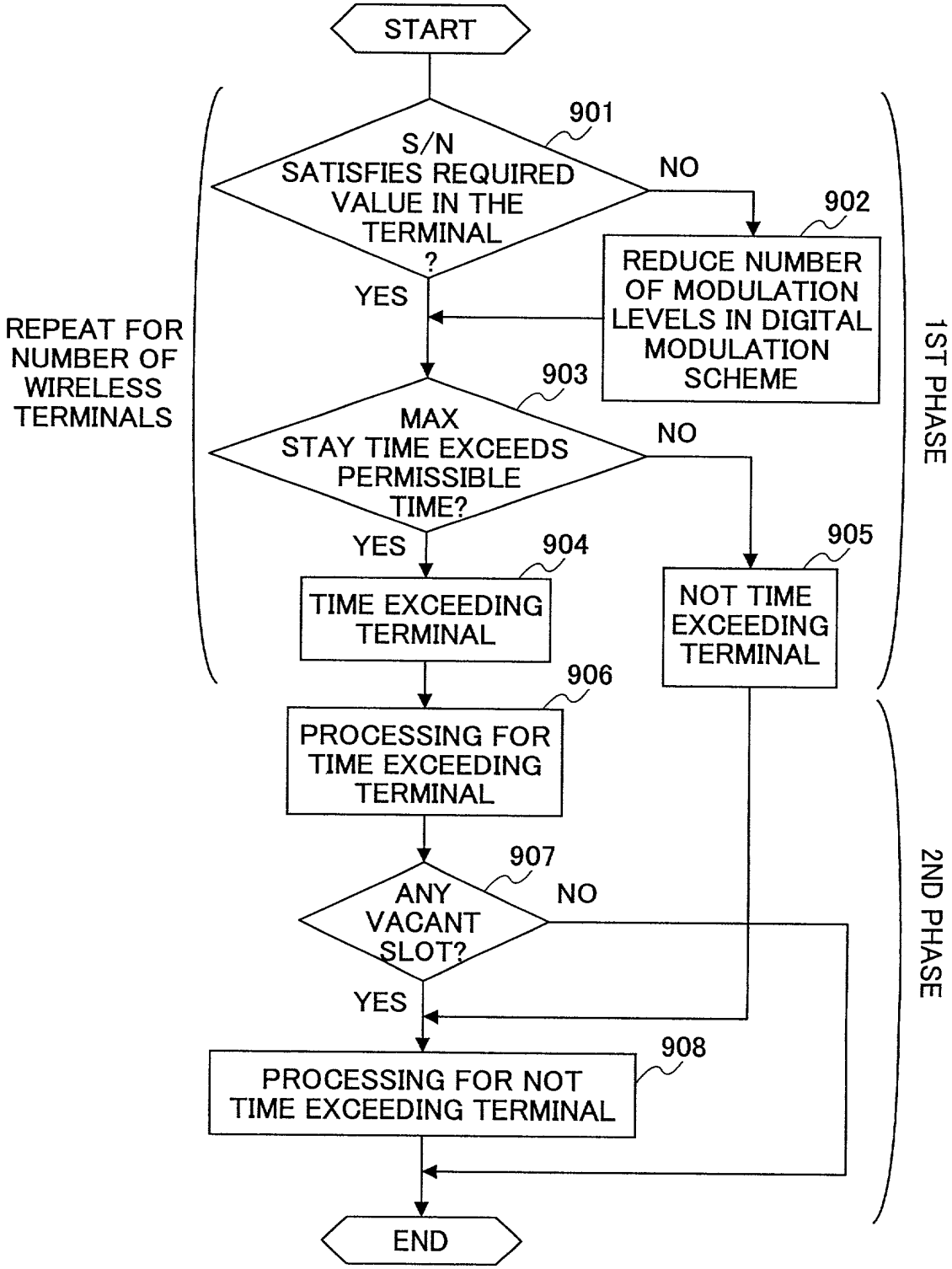

START
901
S/N SATISFIES REQUIRED VALUE IN THE TERMINAL ?
NO
902
REDUCE NUMBER OF MODULATION LEVELS IN DIGITAL MODULATION SCHEME
YES
REPEAT FOR NUMBER OF WIRELESS TERMINALS
903
MAX STAY TIME EXCEEDS PERMISSIBLE TIME?
NO
YES
904
TIME EXCEEDING TERMINAL
905
NOT TIME EXCEEDING TERMINAL
1ST PHASE
906
PROCESSING FOR TIME EXCEEDING TERMINAL
907
ANY VACANT SLOT?
NO
YES
908
PROCESSING FOR NOT TIME EXCEEDING TERMINAL
2ND PHASE
END

FIG.12

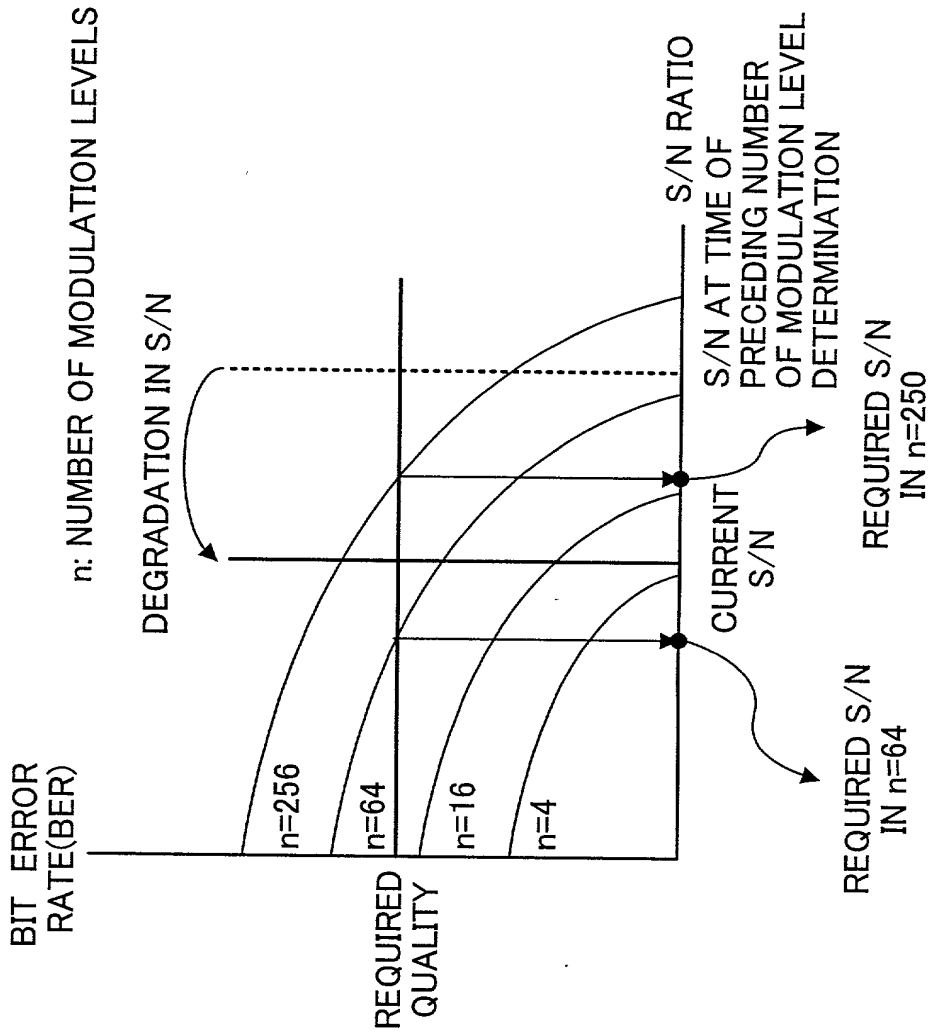

n: NUMBER OF MODULATION LEVELS
DEGRADATION IN S/N
BIT ERROR RATE(BER)
n=256
n=64
n=16
n=4
REQUIRED QUALITY
S/N RATIO
S/N AT TIME OF PRECEDING NUMBER OF MODULATION LEVEL DETERMINATION
CURRENT S/N
REQUIRED S/N IN n=250
REQUIRED S/N IN n=64

FIG.13

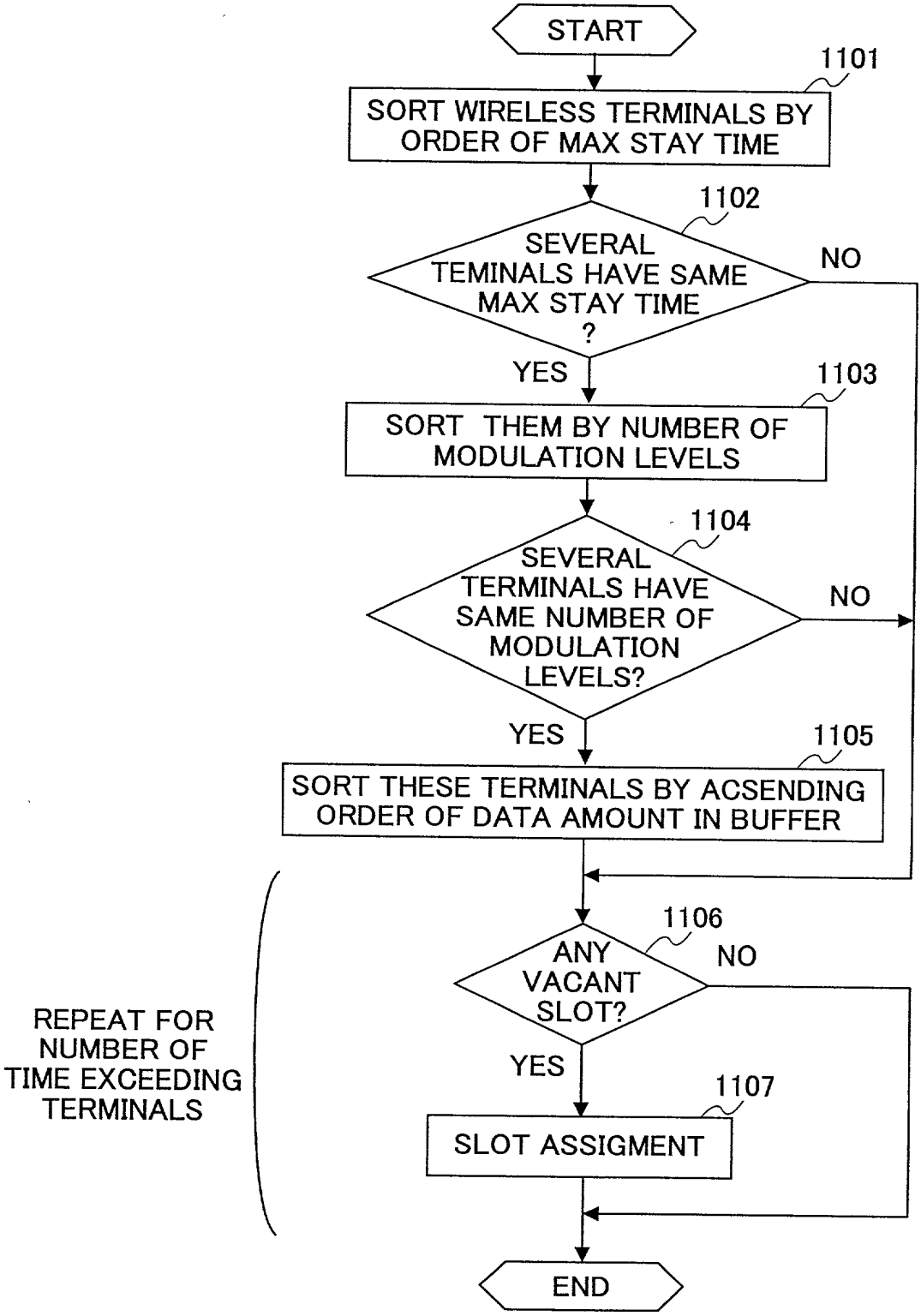

START
1101
SORT WIRELESS TERMINALS BY ORDER OF MAX STAY TIME
1102
SEVERAL TEMINALS HAVE SAME MAX STAY TIME ?
NO
YES
1103
SORT THEM BY NUMBER OF MODULATION LEVELS
1104
SEVERAL TERMINALS HAVE SAME NUMBER OF MODULATION LEVELS?
NO
YES
1105
SORT THESE TERMINALS BY ACSENDING ORDER OF DATA AMOUNT IN BUFFER
1106
ANY VACANT SLOT?
NO
YES
1107
SLOT ASSIGMENT
REPEAT FOR NUMBER OF TIME EXCEEDING TERMINALS
END

FIG.14

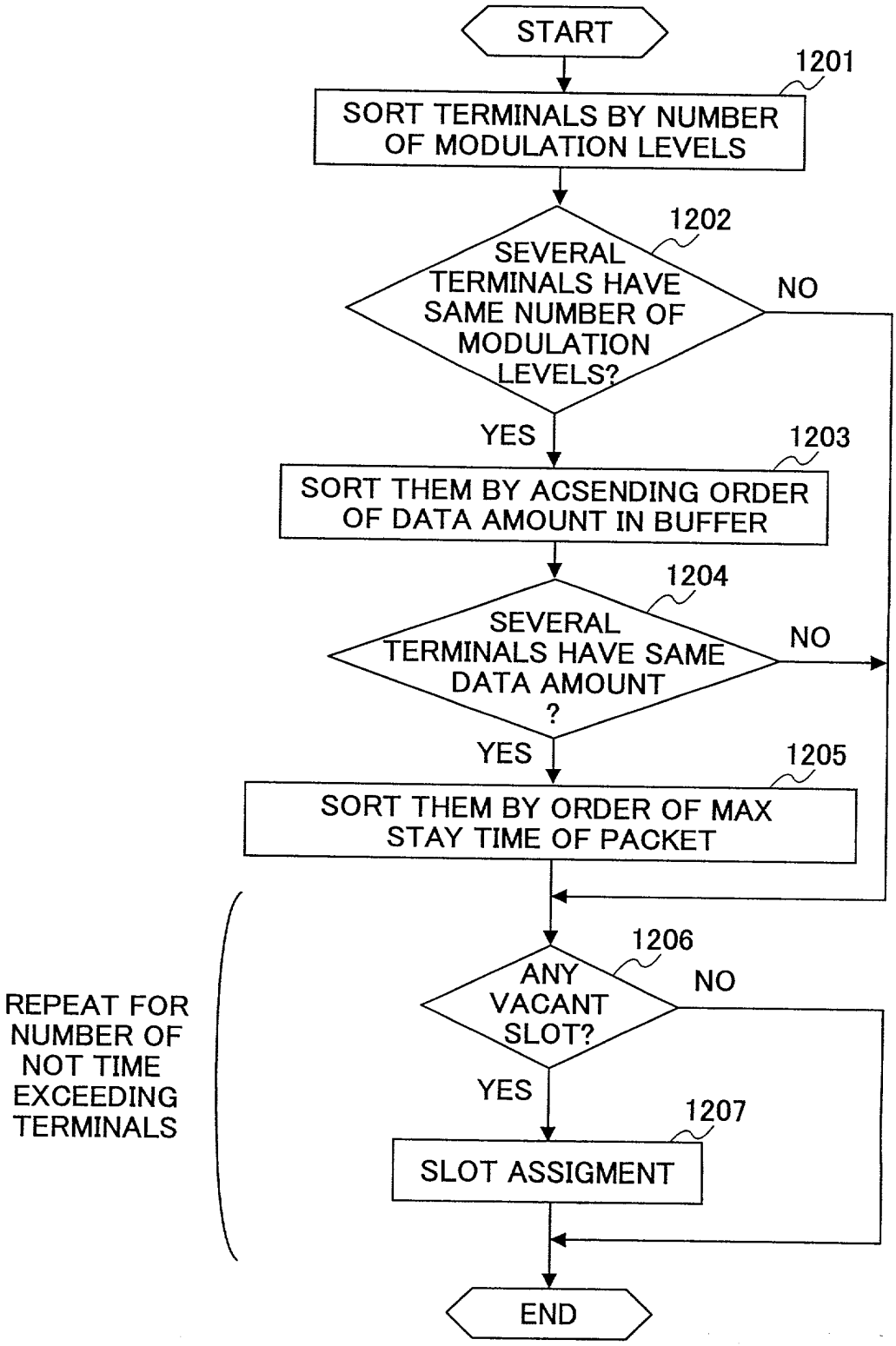
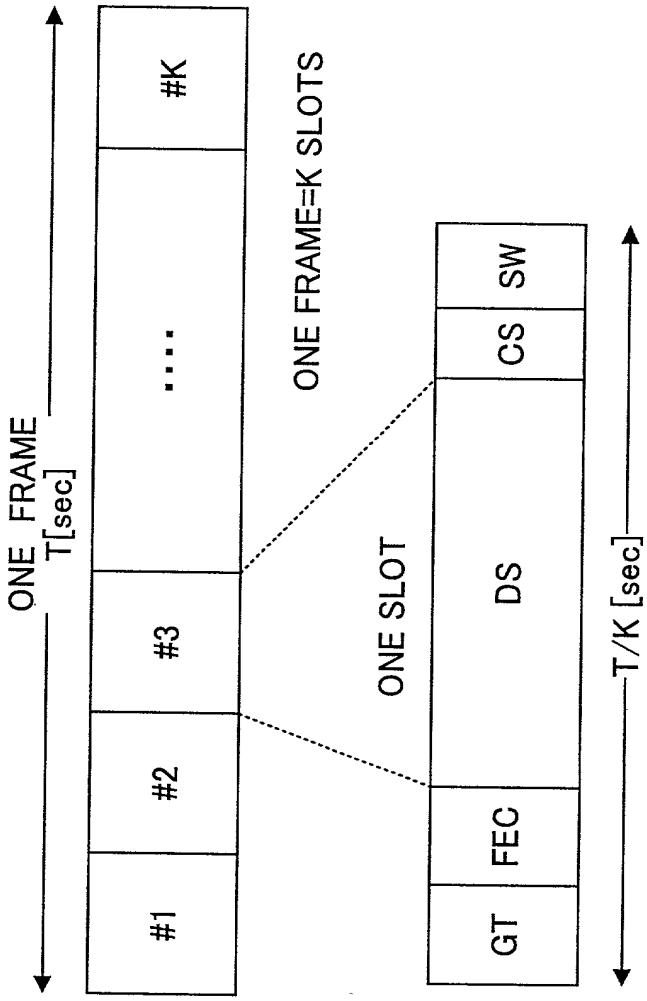

START
1201
SORT TERMINALS BY NUMBER OF MODULATION LEVELS
1202
SEVERAL TERMINALS HAVE SAME NUMBER OF MODULATION LEVELS?
NO
YES
1203
SORT THEM BY ACSENDING ORDER OF DATA AMOUNT IN BUFFER
1204
SEVERAL TERMINALS HAVE SAME DATA AMOUNT ?
NO
YES
1205
SORT THEM BY ORDER OF MAX STAY TIME OF PACKET
1206
ANY VACANT SLOT?
NO
YES
1207
SLOT ASSIGMENT
REPEAT FOR NUMBER OF NOT TIME EXCEEDING TERMINALS
END

FIG.15



SW:SYNCHRONIZATION WORD
CS:CONTROL SERIES
(INCLUDING INFORMATION FOR PARAMETERS FOR PRIORITY ORDER DETERMINATION)
DS:DATA SERIES
FEC:ERROR CORRECTION CODE, ETC.
GT:GUARD TIME

FIG.16

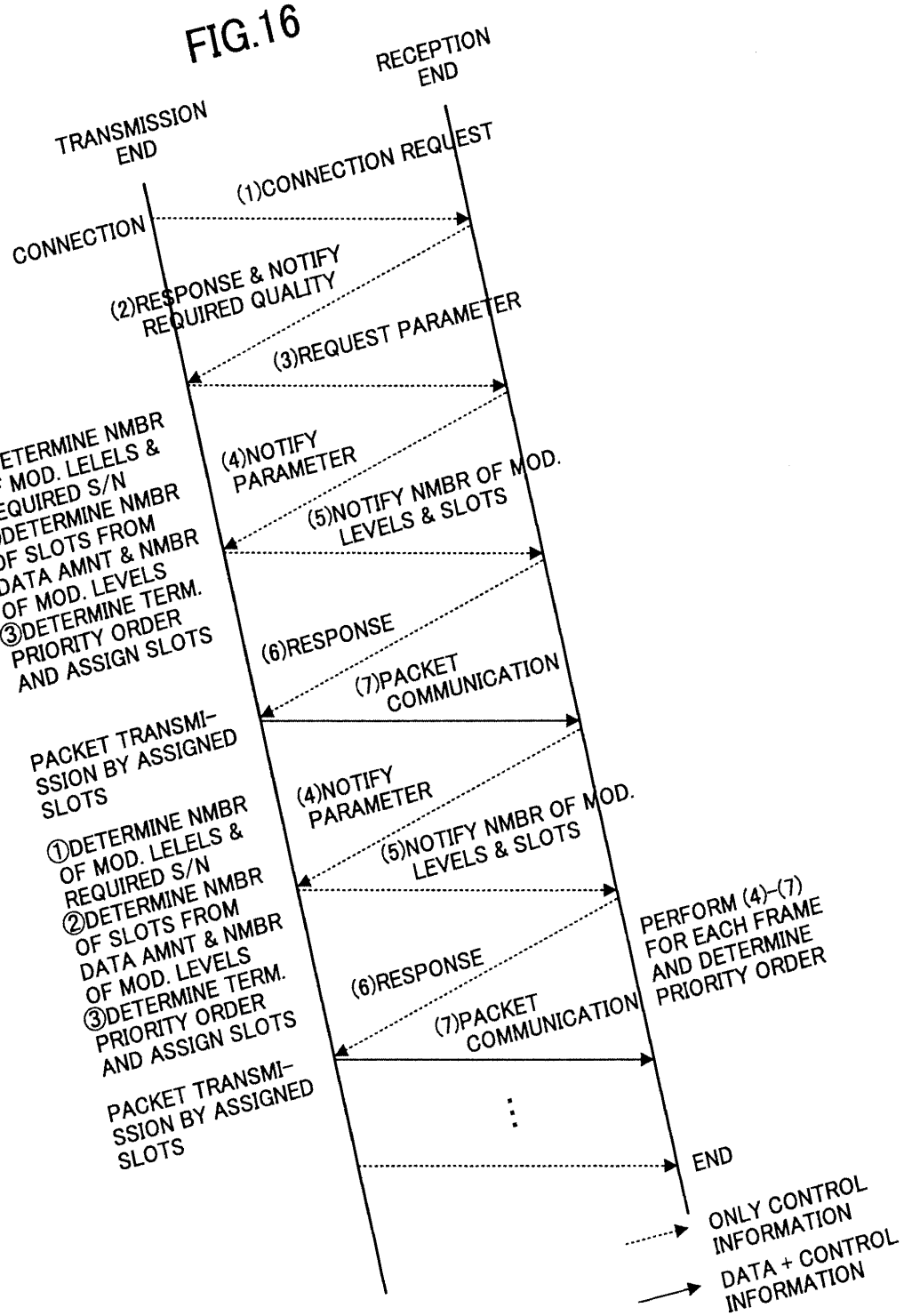
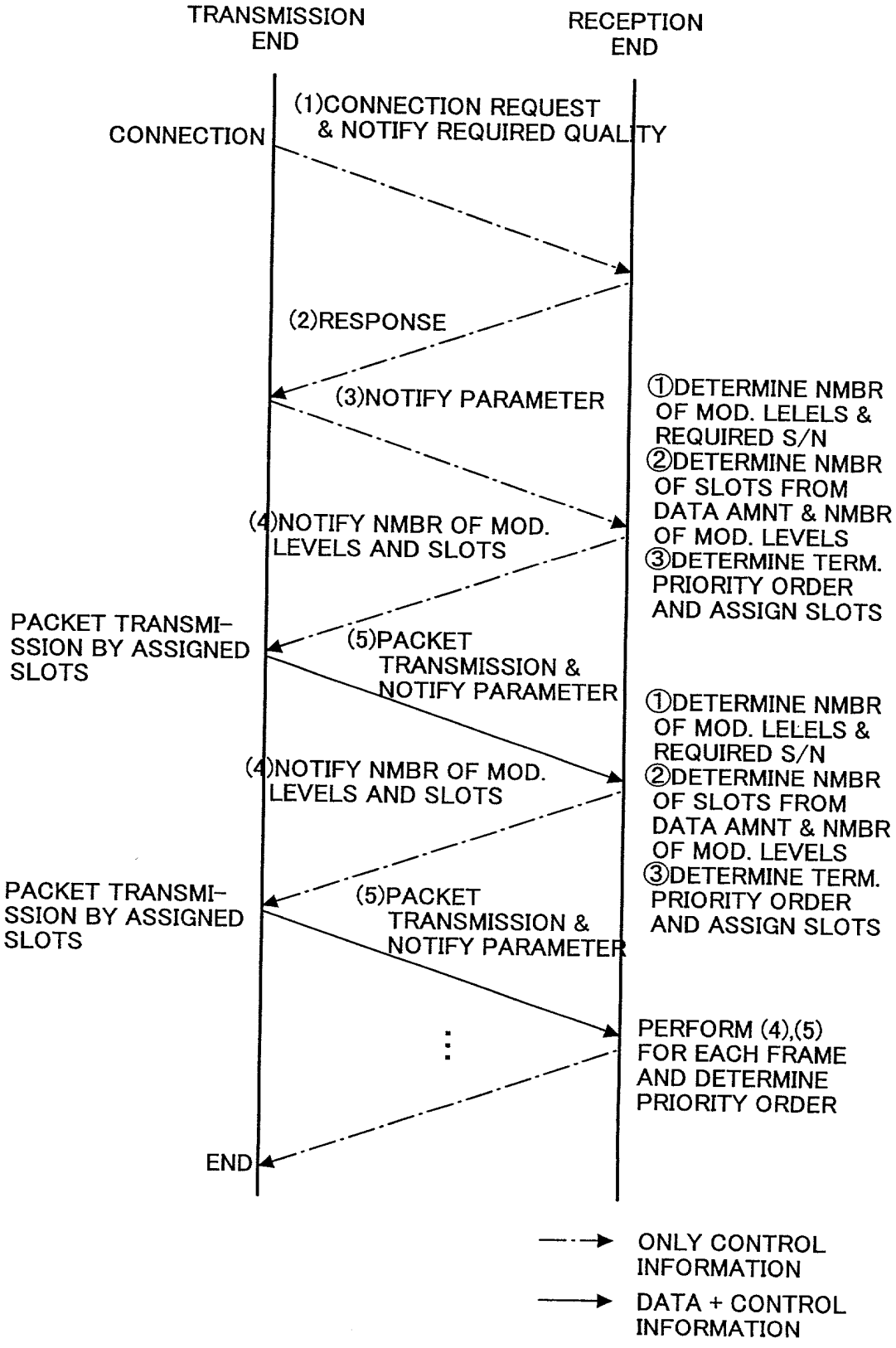

TRANSMISSION END
RECEPTION END
CONNECTION
(1)CONNECTION REQUEST
(2)RESPONSE & NOTIFY REQUIRED QUALITY
(3)REQUEST PARAMETER
①DETERMINE NMBR OF MOD. LELELS & REQUIRED S/N
②DETERMINE NMBR OF SLOTS FROM DATA AMNT & NMBR OF MOD. LEVELS
③DETERMINE TERM. PRIORITY ORDER AND ASSIGN SLOTS
(4)NOTIFY PARAMETER
(5)NOTIFY NMBR OF MOD. LEVELS & SLOTS
(6)RESPONSE
(7)PACKET COMMUNICATION
PACKET TRANSMI-SSION BY ASSIGNED SLOTS
①DETERMINE NMBR OF MOD. LELELS & REQUIRED S/N
②DETERMINE NMBR OF SLOTS FROM DATA AMNT & NMBR OF MOD. LEVELS
③DETERMINE TERM. PRIORITY ORDER AND ASSIGN SLOTS
(4)NOTIFY PARAMETER
(5)NOTIFY NMBR OF MOD. LEVELS & SLOTS
(6)RESPONSE
(7)PACKET COMMUNICATION
PERFORM (4)–(7) FOR EACH FRAME AND DETERMINE PRIORITY ORDER
PACKET TRANSMI-SSION BY ASSIGNED SLOTS
END
ONLY CONTROL INFORMATION
DATA + CONTROL INFORMATION

FIG.17


TRANSMISSION END
RECEPTION END
CONNECTION
(1)CONNECTION REQUEST & NOTIFY REQUIRED QUALITY
(2)RESPONSE
(3)NOTIFY PARAMETER
①DETERMINE NMBR OF MOD. LELELS & REQUIRED S/N
②DETERMINE NMBR OF SLOTS FROM DATA AMNT & NMBR OF MOD. LEVELS
③DETERMINE TERM. PRIORITY ORDER AND ASSIGN SLOTS
(4)NOTIFY NMBR OF MOD. LEVELS AND SLOTS
PACKET TRANSMI-SSION BY ASSIGNED SLOTS
(5)PACKET TRANSMISSION & NOTIFY PARAMETER
①DETERMINE NMBR OF MOD. LELELS & REQUIRED S/N
②DETERMINE NMBR OF SLOTS FROM DATA AMNT & NMBR OF MOD. LEVELS
③DETERMINE TERM. PRIORITY ORDER AND ASSIGN SLOTS
(4)NOTIFY NMBR OF MOD. LEVELS AND SLOTS
PACKET TRANSMI-SSION BY ASSIGNED SLOTS
(5)PACKET TRANSMISSION & NOTIFY PARAMETER
PERFORM (4),(5) FOR EACH FRAME AND DETERMINE PRIORITY ORDER
END
ONLY CONTROL INFORMATION
DATA + CONTROL INFORMATION